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basic imagery interpretation report

Donguz Weapons Test Center (S)

GENERAL PURPOSE WEAPONS INDUSTRIAL FACILITIES
BE: Various
USSR

Secret

WNINTEL

Z-12059/83
RCA-11/0003/83
AUGUST 1983
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INSTALLATION OR ACTIVITY NAME					COUNTRY
Donguz Weapons Test Center					UR
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	See below	See below	See below	See below	See below

MAP REFERENCE

DoD. USATC, Series 200, Sheet 0236-2, scale 1:200,000

LATEST IMAGERY USED	NEGATION DATE (If required)
	NA

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Installation	Geographic Coordinates	Category	BE No	COMIREX No	NIETB No
Donguz Weapons Test Center	51-26-00N 054-50-00E				
Donguz Weapons & Electronics Proving Ground NE	51-32-03N 054-56-40E				
Donguz FA/MRL Test Firing Site	51-30-00N 054-53-41E				
Donguz Surface-to-Air Weapons Firing Site 1	51-28-40N 054-51-50E				
Donguz Controlled Fragmentation Test Area	51-28-00N 054-56-00E				
Donguz Surface-to-Air Weapons Target	51-27-28N 054-50-00E				
Donguz Weapons Test Support Area	51-26-00N 054-50-30E				
Donguz Armor Penetration Range	51-25-10N 054-46-40E				
Donguz Unidentified Construction Activity	51-24 40N 054-48-55E				
Donguz Abandoned Test Monitoring Site	51-23-00N 054-46-20E				
Donguz SAM Test Firing Site	51-19-35N 054-46-00E				
Donguz AAA/SAM Mobile Test Area	51-19-30N 054-42-25E				
Major Related Installations:					
Donguz Military Barracks	51-32-29N 055-00-10E				
Donguz Airfield	51-30-06N 054-59-02E				
Donguz Radrel Station West	51-32-45N 054-50-50E				
Donguz AAA Training Area	51-33-20N 054-51-10E				

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This table in its entirety is classified SECRET/WNINTEL.

ABSTRACT

1. Donguz Weapons Test Center is the major Soviet facility for test and evaluation of antiaircraft artillery and low-altitude surface-to-air missiles assigned to ground forces. The facility is also involved in the systems integration and compatibility testing for electronic countermeasure and electronic support measure systems, and air warning radars assigned to ground force units. To a lesser degree, electronics support systems for tanks, field and self-propelled artillery, and other weapons and armored fighting vehicles are tested and evaluated there. (S/WN)

2. This is the first NPIC basic report on this facility. It covers the period from [redacted] and contains 59 photographs, two tables, and a map. (U)

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INTRODUCTION

3. Donguz Weapons Test Center (DWTC) is in the southwestern USSR, 13 nautical miles (nm) south of Orenburg and 1 nm southwest of Donguzskaya. The facility is situated on hilly terrain and is served by rail, air, all-weather roads, and dirt trails. (S/WN)

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4. According to collateral, DWTC was established in 1947 to test artillery and other weapons assigned to regimental units.[1] A training unit for antiaircraft artillery (AAA) was also established at Donguz in 1947. This training unit was formed from three separate units—a battalion of an AAA regiment previously in Leningrad, an air force squadron, and an infantry company. Correlation of collateral and imagery has confirmed the AAA training unit. Part of the center, known as "Stansiya Donguz Range," is supposedly used for large-scale maneuvers.[2] First imagery of the DWTC revealed that the center had already been well established by 1960. (S/WN/NOFORN)

5. DWTC conducts developmental tests, field tests, and state trials. Developmental testing is conducted at Donguz Weapons and Electronics Proving Ground (WEPG) Northeast. During developmental testing, autonomous, comparative, and compatible tests of a system and its components are conducted to determine if the system meets technical specifications and is suitable for field testing. Field testing is conducted at various Donguz facilities south of the WEPG or at designated troop test facilities in the USSR or other Warsaw Pact countries. During the field test phase, such characteristics as operational ease and durability are evaluated. State trials are usually performed at Donguz WEPG Northeast. During this phase, the system prototype is evaluated and is given final certification by a state commission prior to authorization for series production and field deployment. This phase often ends with a static display of the newly certified system in area A of Donguz WEPG Northeast. (S/WN)

6. Significant systems that have been tested at Donguz since 1960 include the following:

SA-7	ODD PAIR
SA-9	ODD GROUP
SA-13	SPOON REST D
T-64	FLAT FACE B
T-72	DOG TAIL
BMP M-1981	BIG CAP
240mm SP mortar M-1977	BIG CAP B
203mm SP gun M-1975	KING PIN
152mm SP gun M-1981	Modified KING PIN
BM-27, 220mm MRL	BAR BRICK
BM-21, 122mm MRL	Modified BAR BRICK
122mm MRL ZIL-131 (regimental RL)	SWING BOX
	Modified SQUAT EYE
ZU-X (unidentified towed AAA)	STOVEPIPE
ZSU-I (unidentified SPAA ON ZSU-23/4 chassis)	Modified STOVE PIPE
	SKY BOARD
ZSU-X (unidentified SPAA)	SCOUT CAMP
ZSU-23/4	VIEW POINT
LONG TRACK	PAINT BOX
SQUAT EYE	BREAD BIN (S/WN)

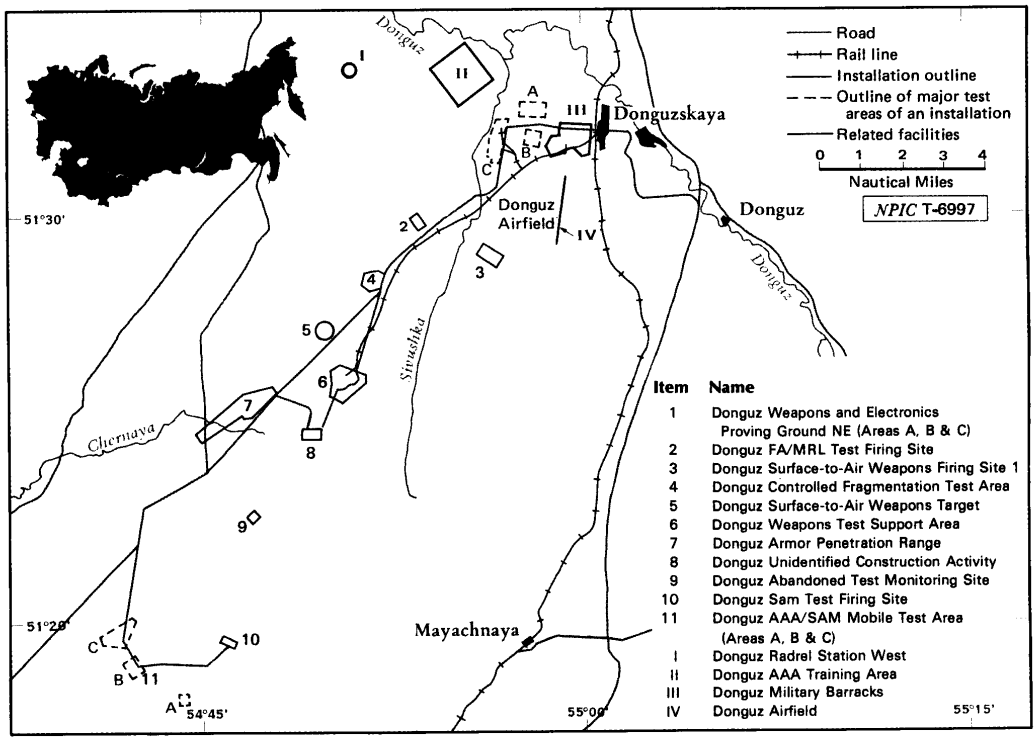

FIGURE 1. LOCATIONS OF FACILITIES AT DONGUZ WEAPONS TEST CENTER, USSR

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BASIC DESCRIPTION

7. DWTC is an oval-shaped area with its long axis running in a northeast/southwest direction. The area extends 21 nm southwest from a point 1 nm west of Donguzskaya. The primary test facilities are on the northeast end with secondary facilities in the central and southwestern areas (Figure 1). (S/WN)

Donguz Weapons & Electronics Proving Ground Northeast

8. Donguz Weapons & Electronics Proving Ground (WEPG) Northeast (Figure 2), formerly Donguz Artillery Test Area, is approximately 2.0 nm north-northwest of Donguz Airfield and 15 nm south-southwest of Orenburg. This facility houses the headquarters for the DWTC. Technical evaluation of weapons systems, research and development (R&D) of new system components, and operational control and coordination of activities at DWTC are performed in this area. (S/WN)

9. The WEPG consists of six R&D-related areas—a vehicle storage park; test areas A, B, and C; a drone launch support area; and an R&D headquarters. (S/WN)

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Vehicle Storage Park

10. The vehicle storage park (Figure 3) is the receiving point for new systems arriving at Donguz for test and evaluation and is also the storage area for equipment used in R&D. At various times, unit displays are set up in the testing areas. Equipment for those displays is stored in the vehicle storage park before the unit display is staged. Occasionally, equipment belonging to the AAA school at Donguz is stored along the east edge of the storage park. (S/WN)

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Test Area A

11. Test area A (Figure 4) is the primary area for evaluation of electronic countermeasure/electronic support measure (ECM/ESM) systems and fire control radars. The area also serves as a test administration area, display area, and storage/-technical support area for test support equipment. (S/WN)

12. ECM/ESM systems have been tested throughout the area; however, the secured section in the northwest corner of test area A has primarily been associated with testing and evaluating of mobile intercept systems such as the SKY BOARD, BAR BRICK, and SWING BOX. The storage/support building for ECM/ESM research is adjacent to this intercept test area. From 1975 to 1980, ECM/ESM radars were stored and tested in test area B while new ECM/ESM test support facilities were being constructed in test area A. Once this construction was completed in 1981, the equipment was moved to test area A. (S/WN)

13. A hardstand in the west corner of the area has been associated with technical work related to fire control radars such as the GUN DISH and FLAP WHEEL. The maintenance building near the hardstand supports this activity. (S/WN)

14. New systems and display equipment are often observed adjacent to administration buildings in test Area A prior to being moved to another area/facility for display or testing. Equipment displays in this area frequently show how new pieces of equipment will be deployed in the field as a unit. Thus, it is possible to determine the deployment pattern before these systems are fully field deployed. (S/WN)

15. Buildings and hardstands in the eastern half of the area are apparently used for the storage and maintenance of test support equipment. The hardstand and buildings at the east end of the area are probably used for calibration of SHIP WHEEL, FIRE WHEEL, and other older fire control radars used in tests. The building-mounted SHIP WHEEL radars are probably used for comparisons with recently calibrated mobile SHIP WHEEL radars. The larger building on the hardstand is probably a technical support building. The area south of the hardstand has been used to store optical tracking equipment. Often, the two-axle carriages used to transport theodolites and optical trackers can be found there. (S/WN)

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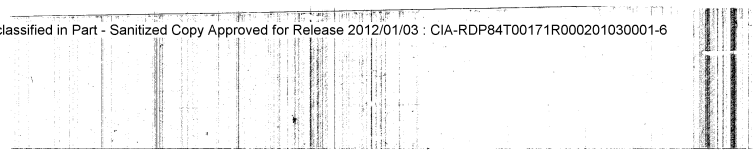

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Test Area B

16. Test area B (Figure 5) is the primary test area for air warning (AW) radars. New AW radars have usually been tested on the south side of the facility or on the hardstand that runs diagonally through the center of the area. The activity in this area is related to the technical evaluation of new systems, comparisons of new systems with the systems they replace, or assessing compatibility with other systems with which they may be deployed. Occasionally, newly deployed systems have been displayed there. From 1975 to 1980, ECM/ESM equipment, which was originally tested in test area A, was tested on the north side of test area B. This was a temporary arrangement during the new construction in test area A. (S/WN)

Test Area C

17. Test area C (Figure 6 and Table 1) is the primary test area for artillery, surface-to-air missiles (SAMs), and armored fighting vehicles (AFVs). Test firings of these systems take place from positions along the west edge of the area. The artillery firing line is used primarily for test firing of towed artillery, but on occasion tanks and self-propelled (SP) artillery systems have been observed there. Seven test stands are in area C. Test stand A is used as an evaluation station for both towed and SP AAA systems. Test stands B and C are primarily used for testing of SAM systems. Test stand D is probably used to test towed AAA systems. Test stand E is the primary stand for firing of multiple-rocket-launchers (MRLs), and test stands F and G are used for SP artillery. However, it is not uncommon to find systems on a test stand that are not usually associated with it. It is also a common practice for temporary test positions and shelters to be erected. Technical support facilities are on the east side of the area, and the storage area is on the north end of the area. (S/WN)

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Table 1.
Test Area C at Donguz Weapons and Electronics Proving Ground Northeast
(Keyed to Figure 6)

Item	Function	Dimensions (m) L	W	H	Remarks
1	Revetted stor bldg				
2	Revetted stor bldg				
3	Revetted stor bldg				
4	Stor/spt bldg				
5	Bnk stor bldg				
6	Stor bldg				
7	Stor bldg				
8	Stor/spt bldg				
9	Stor/spt bldg				
10	Stor/spt bldg				
11	Stor/spt bldg				
12	SP arty maint/engr bldg				3-sty bldg has been associated with testing of SP guns & MRLs
a	Admin sect				
b	Engr/sect				
c	Maint bay				
13	Admin bldg				
a					
b					
c					
14	Stor/spt bldg				
15	Stor/spt bldg				
16	Spt bldg				
17	Spt bldg				
18	Security bldg				
19	Security bldg				
20	Test spt bldg				
21	Spt bldg				
22	Test spt bldg				
23	Spt bldg				
24	Spt bldg				
25	Spt bldg				
26	Test spt bldg				
27	Spt bldg				
28	Test ops bldg				
29	Admin/spt bldg				
30	Admin/spt bldg				
31	Stor/spt bldg				
32	Stor/spt bldg				
33	Tracking bldg	2			2 SHIP WHEEL radars mounted on roof of bldg; mobile SHIP WHEEL & TWIN CIGAR are often associated with this bldg
34	Secure stor bldg				
35	Stor/spt bldg				
36	Ops bldg				
37	Test spt bnk				
38	Spt bldg				Connected by walkway to Bldg 39
39	Observation point				4 cinetheodolites are mounted on bldg; 2
40	Test monitoring/ops bldg				2-van monitoring stations, each having an ops van & an imaging van with 2 cinetheodites mounted on them, are cable connected to the bldg; two platforms, each mounting a TWIN CIGAR antenna are on the west side of the bldg
41	Heating plant				Conduit connects this bldg with pad B
42	Test ops/control bldg				A tracking telescope is mounted on roof of bunkers;
a	Test monitoring bnk				1 mobile TWIN CIGAR is adjacent to van
43	SAM/AAA maint & engr bldg				Bldg has an engr sect & maint bay with an overhead crane used to service AAA & mobile SAMs; Bldg adjacent to this one has two unid objects on roof. poss cameras
44	Stor/spt bldg				Addition to bldg
45,46	Bnk instrumentation (2)				Prob obtains ballistic data for research engrs
47,48	Bnk instrumentation (2)				Prob obtains ballistic data for research engrs
49,50	Bnk instrumentation (2)				Prob obtains ballistic data for research engrs
51	Artillery firing line				Line is serviced by a traveling gantry crane
52	Spt bldg				
53	Spt bldg				
54	Stor bldg				
55	Spt (PUG) bldg				Bldg is linked by conduit to the instrumentation
56	Artillery firing line ops bldg				on the arty firing line
57	Stor/spt bldg				
58	Stor/spt bldg				
A	AAA test pad				One 13 x 8 spt bldg & one 9 x 8 spt bldg are associated with this pad; SP & towed AAA observed on this pad
B	SAM test pad				This pad is linked by conduit to target T-7 (Figure 2)
C	SAM/AFV test pad				
D	Unid test pad				
E	MRL test pad				
F	MRL/arty test pad				
G	MRL/arty test pad				

NA = Not Available.

This table in its entirety is classified SECRET/WNINTEL.

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Drone Launch Support Area

18. The drone launch support area (Figure 7A) is part of Donguz Airfield but is used to support DWTC and air defense training conducted at Donguz AAA Training Area. The area is used to prepare drones for launching. The launch pad (Figure 7B) for these drones was previously to the west of the aircraft parking apron. In 1975, the drone launchers had been moved to the south edge of the apron and, in 1979, were permanently set up just south of the apron. (S/WN)

R&D Headquarters

19. The R&D headquarters (Figure 8 and Table 2) is a separately secured area along the west edge of Donguz Military Barracks. This facility is the control center for all test activity at Donguz. It also evidently provides transient billeting for technical personnel involved in the testing of new systems because passenger buses and sedans are frequently seen at the headquarters area during testing or display of new equipment. (S/WN)

Table 2.
Correlation of Significant Test Activities with Related Activity at the R&D Headquarters

Date	Significant Events	R&D HQ Activity	Remarks
	Developmental testing of VIEW POINT in area A	2 passenger buses, 7 cargo trucks, & 4 utility trucks	
	State trials of 152mm SP gun M-1981 in area C	1 passenger bus, 2 sedans, 1 cargo truck, & 1 utility truck	By [redacted] state trials were over & the vehicles at the R&D Hq were gone
	ZSU-I observed in an AA btry display in area A	1 passenger bus, 3 sedans, 1 cargo truck, 2 van-bodied trucks & 1 utility truck	1 passenger bus was at main gate to area A on [redacted] & a different bus was there on [redacted]
	Developmental testing of ZSU-X in area A	1 passenger bus, 4 sedans, 1 GAZ-66, & 1 box-bodied truck	2 sedans & 1 cargo truck were at test area A
	Developmental testing of the ZSU-X in area A	2 passenger buses, 4-6 sedans, & numerous trucks	3 sedans & 1 passenger bus were observed moving to area A on [redacted]
	Comparative test of 152mm SP gun M-1981 & 152mm FG M-1976 in area C	1 passenger bus & 5 cargo trucks	
	Developmental testing of the SCOUT CAMP in areas A & B	2 passenger buses, 4-6 sedans, & numerous trucks & utility trucks	Personnel were observed inside Hq area during entire period
	State trials & display of the SKY BOARD in area A	2-4 passenger buses, 4 sedans, & numerous cargo & utility trucks	High count of 4 passenger buses at Hq was observed on [redacted] when 3 SKY BOARDs were displayed side by side in area A

NOTE: Normal activity at the R&D Headquarters does not usually include buses or sedans. The presence of buses and sedans indicates the arrival of dignitaries and/or technical personnel.

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Donguz FA/MRL Test Firing Site

20. The Donguz Field Artillery (FA)/MRL Test Firing Site (Figure 9) is approximately 13.5 nm west of Donguz Airfield. This facility is primarily used to test fire field artillery pieces, SP artillery, and MRLs. The lack of test monitoring equipment in the area suggests that the test firings are used to determine the tube life and optimum sustained rate of fire for the system being tested. The facility may also be used for firing demonstrations. The test firing site was probably constructed in late 1970. By [redacted] two blast walls had been 25X1
constructed to the rear of the firing line, and two WHIFF-type trailers were nearby. Heavy snow coverage prevented further analysis of the site at that time. However, on [redacted] one L-25X1
shaped and one rectangular revetment were identified on the firing line, in addition to the trailers and blast walls. These revetments were possibly used for the firing of shoulder weapons. A rectangular excavation was in the area where the WHIFF-type trailers were later placed on foundations. (S/WN)

21. Since its completion, a number of significant artillery pieces have been observed there. The observation included the following: BM-21/122mm regimental MRL [redacted] BM-27 [redacted] 152mm SP gun M-1981 [redacted] and the 152mm field gun M-1976 [redacted] There has also been ongoing activity involving older pieces such as the 203mm howitzer B-4, 152mm D-20, and 122mm FA. (S/WN)

Donguz Surface-To-Air Weapons Firing Site 1

22. The Donguz Surface-to-Air Weapons Firing Site 1 (Figure 10) is 4.6 nm west-southwest of Donguz Airfield. This facility serves as a SAM and AAA test firing point. The Donguz Surface-to-Air Weapons Target, 1.7 nm southwest of the site, is the primary down-range target. The firing site consists of two monitoring buildings and one control bunker in a line. These structures are similar to structures found at the north end of the Donguz Armor Penetration Range. The firing site contains four support buildings, one revetted test firing hardstand, five equipment hardstands, and an operations/support bunker. (S/WN)

23. Telemetry equipment and optical devices in the area indicate that this facility conducts test firings of SAM systems. Despite numerous observations of possible SAMs, positive identification of a specific SAM system has not been made. (S/WN)

24. One FA piece and a blast mark from an unidentified weapons system were identified in the area on [redacted] The blast mark was possibly caused by the test firing of a shoulder-fired SAM. (S/WN)

25. On [redacted] a 57mm AA gun S-60 exercise was identified. Ten 57mm AA gun S-60s, six FLAP WHEELs, one FIRE CAN, and a generator trailer were involved in the exercise. The S-60s were set up in two formations—one consisting of six guns in a circle and the other consisting of four in a square. (S/WN)

Donguz Controlled Fragmentation Test Area

26. The Donguz Controlled Fragmentation Test Area (Figure 11), previously called Pervomayskiy Radrel Station Southwest, is 2.8 nm southwest of Donguz Airfield. Until 1969, the facility consisted of a tower and buildings at the base of the tower. In 1970, the area was enclosed by a double security fence, and test station B (Figure 11) was constructed. Four other test stations have been constructed since then, and new construction was evident at the end of the reporting period. (S/WN)

27. Since 1972, this area has primarily been used for fragmentation tests against derelict Soviet fighters, bombers, and helicopters. The area has also been used as a deployment site for new ECM/ESM systems being tested at Donguz. The following ECM/ESM deployments have been observed there: one PAINT BOX system on [redacted] and again on [redacted] one SCOUT

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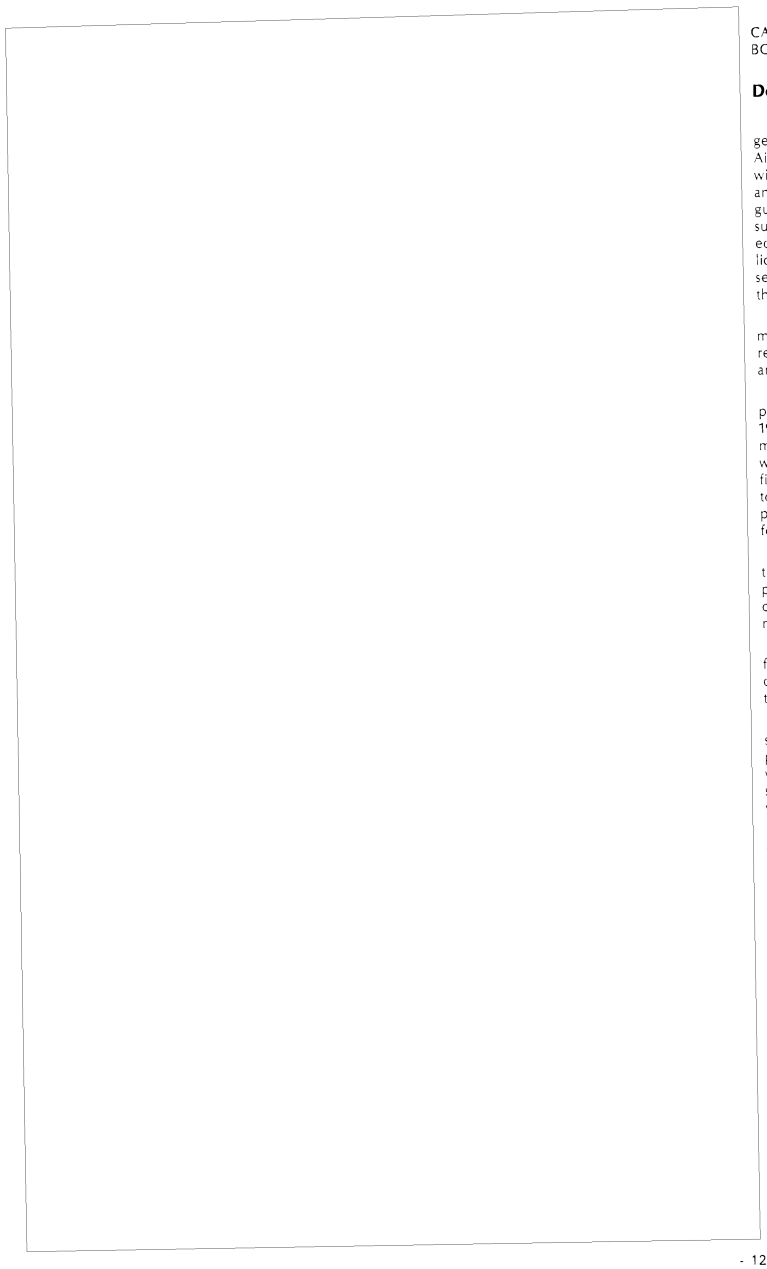

CAMP set on [redacted] and two PAINT BOX systems on [redacted] (S/WN)

Donguz Surface-To-Air Weapons Target

28. The Donguz Surface-to-Air Weapons Target (Figure 12) is 4.7 nm southwest of Donguz Airfield. The facility consists of two large towers with long sloping ramps which serve as a target for antiaircraft (AA) weapons systems fired from Donguz Surface-to-Air Weapons Firing Site 1 or the surface-to-air weapons firing site on the north edge of Donguz Armor Penetration Range. Derelict fighter aircraft are suspended on cables to serve as targets (Figure 12) or are drawn up one of the ramps. (S/WN)

29. As of September 1982, no actual confirmations of SAM firing at this target have been reported. However, evidence of test preparations and posttest damage have been observed. (S/WN)

30. The surface-to-air weapons target was present on the first imagery of the Donguz area in 1960. According to collateral information, SA-7 missiles were test fired at Donguz. The SA-7 missile was developed in the late 50s and early 60s and first produced in 1962.[3] The presence of surface-to-air weapons test facilities at Donguz during that period would have made it a logical R&D facility for the SA-7 program. (S/WN/NOFORN)

31. A probable MiG-15 aircraft was seen on the ramp of the east tower on [redacted] The presence of this aircraft indicates a probable SAM or AAA test. The SA-9 was also under development during that timeframe. (S/WN)

32. Little activity at the facility was observed from [redacted] through [redacted] One damaged aircraft remained in the area throughout the period. (S/WN)

33. On [redacted] a FAGOT/FRESCO was suspended between the towers, indicating an apparent test was about to take place. This activity was probably SA-13-related, because it was observed during the timeframe that the SA-13 system was in state trials. (S/WN)

34. On [redacted] a damaged FAGOT/FRESCO was identified on the ground between the towers. The aircraft was oriented north, and its wings and most of the fuselage were intact; however, the tail section was totally destroyed. Aircraft debris was also observed to the south of the aircraft. The damage to the aircraft is characteristic of heat-seeking missiles which home in on the engine exhaust and impact into the engine, often leaving all but the tail end of the aircraft intact. (S/WN)

35. From [redacted] through [redacted] 1982, at least five FAGOTs/FRESCOs were identified in the area. While no damaged aircraft were identified, new debris indicated that tests were performed after each aircraft observation. (S/WN)

Donguz Weapons Test Support Area

36. Donguz Weapons Test Support Area (Figure 13) is 6.5 nm southwest of Donguz Airfield and 22.0 nm south-southwest of Orenburg. Referred to by collateral sources as the Stantsiya Donguz (Station Donguz) range,[2] this area is used as a troop-training and field testing area. The soldiers involved in these activities are billeted in this remote area, probably to prevent their seeing sensitive research activity underway at the Donguz WEPG Northeast. The area is also used as a support area for test activity performed by personnel engaged in R&D at Donguz. Personnel arrive either by road or by rail. When security is a consideration, rail is probably used to transport personnel because the rail line skirts all of the sensitive test areas. (S/WN/NOFORN) 25X1 25X1

37. The numbers and types of buildings in the support facility remained essentially unchanged from 1965 through 1975. A new barracks/administration area and an underground small-arms range were constructed in the southeast corner of the facility between 1976 and 1979. The construction of the new barracks/administration area coincided with the construction of the Donguz Armor Penetration Range. (S/WN)

38. As of [redacted] the roof of the administration building (item 25, Figure 13) was in a poor state of repair. Also, the building adjacent to the railway unloading point was damaged by fire shortly after its construction in 1976 and has remained unrepaired. (S/WN) 25X1

39. Field testing and troop-training activity has been observed at this facility since 1968. Among the more significant observations were the possible field testing of the LONG TRACK and ODD PAIR on [redacted] field testing of the PAINT BOX and SPOON REST D on [redacted] and troop training with the 240mm SP mortar M-1975 on [redacted] (S/WN) 25X1 25X1 25X1 25X1 25X1

40. On [redacted] six probable 85mm AA guns were identified on a sod hardstand near the north entrance to the area. Since this initial identification, the number has varied, indicating that the guns are probably used periodically for training. (S/WN) 25X1 25X1

41. On [redacted] two vehicles were at the south end of the new barracks/administration area, and heavy smoke was coming from the new messhall. This was the first indication that the facilities were occupied. However, no significant ground order of battle was identified. It cannot be determined if the occupants were ground force soldiers, R&D personnel, or engineers completing the construction of the new facilities. Since [redacted] no significant activity has been observed, although track activity and area maintenance indicate that the area is still being used. (S/WN) 25X1 25X1 25X1 25X1

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Donguz Armor Penetration Range

42. Donguz Armor Penetration Range (Figure 14; formerly Donguz Instrumentation/Artillery Test Area) is 8.8 nm southwest of Donguz Airfield and consists of an armor penetration range, direct-fire test stations 1 and 2, unidentified test station 3, and a support area. The north end of the facility contains a surface-to-air weapons test firing site used to fire at Donguz Surface-to-Air Weapons Target. (S/WN)

43. The armor penetration range will probably become the primary test facility for new munitions. The test areas are geared toward evaluating the performance characteristics of rounds, not artillery pieces. However, the direct-fire test stations may be used to evaluate the effect of gun tube design on the stability of rounds. (S/WN)

44. The Donguz Armor Penetration Range has been under construction since 1976. Prior to 1976, the only facility in the area was the surface-to-air weapons test firing site. Test station 2 was completed in 1976, station 1 was completed in 1978, and the armor penetration range was still not complete with conduit and monitoring devices being installed as of September 1982. Because of continued construction, no significant test activity has been observed on the range firing line. (S/WN)

45. New systems have not been identified at the Armor Penetration Range. However, significant testing of currently deployed systems has been observed at the facility. This activity includes the firing of a possible T-12 antitank gun at test station 2 from 1976 to 1979; the presence of two probable 203 mm howitzer B-4s, one probable 152mm howitzer D-20, and an unidentified artillery piece at station 1 on [redacted] an unidentified vehicle/piece of equipment at the SAM/AAA firing hardstand on [redacted] a T-64 tank at station 1 on [redacted] and testing of a gun tube mounted on a 203mm howitzer B-4 chassis at station 1 on [redacted] (S/WN)

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Donguz Unidentified Construction Activity

46. Donguz Unidentified Construction Activity (Figure 15) is 8.5 nm southwest of Donguz Airfield. Contruction at this facility was first identified on [redacted] The facility was still under construction on [redacted] (S/WN)

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47. The operations area for this facility is enclosed by a berm, 336 meters long on the east and west walls, 136 meters long on the north and south walls, and [redacted] high. The two square ground scars in the enclosed area have trenches in which conduits/cables for the operation will be laid. Each square consists of two concentric trenches. The inner trench is 85 by 82 meters, and the outer trench is 98 by 95 meters. Holes have been dug at regular intervals along the trenches, with those on the outer trench aligned with those on the inner trench. These holes are probably points at which either electrical devices, junction boxes, or dispensing devices will be located. Six pairs of holes are spaced [redacted] apart along

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the outer sides of the squares. The three inner sides each have five pairs of holes spaced [redacted] meters apart. (S/WN)

48. The support area is outside the revetted area. The large bunker in the support area is probably the operations bunker as all of the primary structures share a common trench with this bunker. The T-shaped support building provides access to the revetted area. This structure is identical to the structure embedded in the berm behind the artillery firing line at Donguz WEPG Northeast. So, it is suspected that the area inside the berm will also be used for explosives research. (S/WN)

49. Two additional structures appear to be important to the operation of this facility, the small square building embedded in the north wall of the berm and the unidentified structure in the southwest corner of the area. The building in the wall of the berm has a trench which intersects with the trench leading from the center of the operations bunker to the operations area. The trench, leading from the unidentified structure, intersects with a conduit that enters the west wall of the operations bunker. A second conduit from the same area of the bunker's west wall intersects with a trench which leads into the operations area. The trench from the center of the operations bunker feeds into a trench network that includes the inner trenches of the two square areas. The trench at the west end of the operations bunker feeds into a network which includes the outer trenches. (S/WN)

50. Based on the above analysis, the central portion of the operations bunker and the square building embedded in the berm are related to the functions of the inner trenches in the operations area. The square building probably operates independently of the operations bunker. The unidentified structure in the southwest corner of the area appears to be a storage facility which feeds into the west end of the operations bunker. The operations bunker then controls the functions of the outer trenches in the operations area, possibly using substances stored in the unidentified structure. (S/WN)

51. A possible function of this facility is fuel-air explosives testing. Fuel-air explosions are accomplished by a two-stage process. In the first stage, a substance is spread over a relatively large area by an explosive charge. The substance mixes with the air and obtains an explosive oxygen ratio. A second charge detonates the mixture, and the result is a uniform and destructive ground-overpressure. Probable fuel-air explosives research has been observed at Krasnoarmeysk Fragmentation/Munitions Test Area [redacted] (S/WN)

52. Two apparent problems arise when conducting fuel-air explosives research: protecting the test facility structures from the effect of the resulting blast and keeping the mist contained to a specified area. The large berm surrounding the operations area would probably solve these problems. Additional protection is provided by using bunkers as opposed to above-ground structures. One area that could be of concern is the unprotected entrance to the operations area. Any structures near the entrance would be affected by the blast; however, no structures are presently in this danger zone (Figure 15). (S/WN)

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Donguz Abandoned Test Monitoring Site

53. Donguz Abandoned Test Monitoring Site (Figure 16), 10.5 nm southwest of Donguz Airfield, once was a primary monitoring station for SAM research at Donguz. It was directly linked to the Donguz AAA/SAM Mobile Test Area. The first high-resolution imagery of the area was obtained on [redacted] and the facility was full25X1 operational. Tracking equipment in the area included three probable tracking telescopes, two platform-mounted cinetheodolites, and unidentified antennas mounted on the roof of the operations building. Also, four positions for probable fixed metric cameras are on the roof of the operations building. This installation was abandoned in 1973. However, the operations building remains intact and could conceivably support future operations. (S/WN)

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Donguz SAM Test Firing Site

54. The Donguz SAM Test Firing Site (Figure 17) is 14.4 nm southwest of Donguz Airfield. Five associated target mounds are at varying azimuths and distances from this facility. Helicopters are placed on these mounds to serve as targets for SAM testing (Figure 18). Similar targets can be found at Emba MTC Unidentified Construction Activity [redacted]. Donguz SAM Test Firing Site is probably used for the test firing of mobile SAM and SP AAA systems. Two two-axle van trailers, mounting TWIN CIGAR telemetry antennas, and one SHIP WHEEL set were on the radar mound in the area on [redacted] The presence of the telemetry antennas indicates probable missile testing. Also, heavy track activity observed on [redacted] indicated that a tracked vehicle had been in the area and had been backed onto the firing hardstand adjacent to a possible generator trailer. The only tracked SAM observed at Donguz has been the SA-13. An increase in the number of destroyed drones northeast of the facility since 1981 seems to confirm SAM testing. However, some of these drones may have been shot down by systems that were being tested at the nearby Donguz AAA/SAM Mobile Test Area, 2.5 nm to the west. (S/WN)

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Donguz AAA/SAM Mobile Test Area

55. The Donguz AAA/SAM Mobile Test Area (Figure 19) is 16 nm southwest of Donguz Airfield. Its primary function is the test firing of newly developed SAM systems. This function was indicated by the presence of numerous telemetry radars, optical tracking/observation devices, and tracking radars since September 1967, along with numerous destroyed drones to the north of the area. The area is also used to test AAA, and is probably also used to train air defense units during large-scale exercises conducted at Donguz. The AAA/SAM mobile test area consists of three test operations areas (A, B, and C), eight monitoring stations (MSs), and two missile/drone launch pads (LPs). (S/WN)

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56. From 1960 to 1978, area A (Figure 20) was one of the main test monitoring facilities for the AAA/SAM mobile test area, as well as the vehicle storage area for test vehicles. On the first high-resolution imagery of [redacted] the area 25X1 was equipped with cinetheodolites, portable tracking telescopes, FIRE WHEEL radars, and van trucks. The presence and arrangement of this equipment indicated missile test activity. Cinetheodolites are used to monitor the flight characteristics of missiles, and tracking data provided by the FIRE WHEEL radars is probably used to point the cinetheodolites. The van trucks in the area possibly were ultra-high-frequency/very-high-frequency (UHF/VHF) communications equipment for communicating with other operational areas. In 1978, the area was stripped of its monitoring equipment. The area currently is not used as a MS; however, track activity in the area and the occasional appearance of vehicles suggest that it is still used for vehicle and equipment storage. (S/WN)

57. Area B (Figure 21) is primarily a SAM test monitoring facility similar to area A. On the first high-resolution imagery of [redacted] the 25X1 facility was equipped with one cinetheodolite/tracking telescope on a plinth, six fixed metric cameras, two FIRE WHEELs, a PUAZO 6, a SPOON REST A set, and three probable UHF/VHF communications vehicles. Missiles being tested in the area can be tracked continuously and monitored with this equipment. In addition, the fixed metric cameras can record the missile flight on film without tracking the vehicle. The PUAZO-6 fire control director and FIRE WHEEL radars provide pointing data for the cinetheodolite/tracking telescopes. Other systems observed in the area have been used to support various tests or training exercises. (S/WN)

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58. Area C (Figure 22) is the firing facility for SAM systems. From 1966 through 1971, the area consisted primarily of revetments and unidentified monitoring devices. However, in 1972, a drone launch facility and concrete test stands were constructed in the area. From this area, mobile SAMs can be fired from revetments or from a hardstand. Drones are launched from the five-position drone LP in area C or possibly from LPs 1 and 2, east of area C (Figure 19). On occasion, telemetry equipment and tracking radars have been identified in the area. (S/WN)

59. Figure 19 shows the location and cable connections between the two missile/drone LPs and eight MSs. The function, description, and construction date are summarized on Figure 19. (S/WN)

60. Unidentified structures are throughout the mobile test area. Many of the structures are possibly part of the test monitoring equipment; others are obviously part of the underground cable system. The majority of these items have no identifiable test function. (S/WN)

61. The facilities at the AAA/SAM Mobile Test Area changed only slightly between 1966 and 1970. Most of the construction centered around the completion of fixed metric camera station 3 which was under construction in 1967. Construction of MS 5 was first observed in September 1969 and was complete by October 1970. (S/WN)

62. From 1972 to 1974, considerable construction was observed throughout the AAA/SAM Mobile Test Area. This construction was probably in preparation for the SA-13 testing observed there in 1973 and 1974. Major construction in the area included a main drone LP and test firing hard stands in area C, LPs 1 and 2, camera stations 6 and 8, two underground storage bunkers in area B, and new roads servicing the major test and test support facilities. LPs 1 and 2 have rails that are similar in appearance to those used for drone launches. However, on [redacted] one of the launch rails at LP 2 had a light-toned, tubelike object mounted on it. The identification of this tubelike object suggests two other possible functions for LP 2, other than drone launch. One could be the remote firing of individual SAMs, and the second could be the remote firing of new portable one-man systems. (S/WN) 25X1

63. The following construction occurred from 1975 to 1982: MS 2 was completed in 1975. Also in 1975, troop and vehicle revetments were dug along the north side of area B. These revetments resemble the type of positions the Soviets use to train soldiers on the firing of portable one-man SAM systems such as the SA-7. In 1979, a storage building was constructed in area B (item 9, Figure 21). This building is probably used to store

logistics and test support equipment. No other significant construction was observed through [redacted] (S/WN)

64. The test area is primarily associated with low-level SAM testing as evidenced by the presence of SA-9 and SA-13 on [redacted] and by the test firing of SA-13 on [redacted] However, a six-gun-battery of 85mm AAA guns has been in area B since [redacted] and a number of electronics systems have been observed, including the SQUAT EYE and BAR BRICK on [redacted] the BREAD BIN on [redacted] and the ONE EYE and TWO SPOT ground control approach (GCA) system until 1970. These systems might have been undergoing further tests and not supporting other test activities in the area. (S/WN)

MAJOR RELATED INSTALLATIONS

Donguz Military Barracks

65. Donguz Military Barracks (Figure 23) is 0.5 nm west of Donguzskaya and 2.5 nm north of Donguz Airfield. This installation is probably an AAA school. Based on a correlation of imagery and collateral, an AAA training battalion, a rifle battalion, and an attached air force squadron are associated with the school. According to collateral, an AAA battalion from the Leningrad region was moved to Donguz in 1947. One rifle battalion and an air force squadron were attached to the AAA battalion.[1] Activity observed at Donguz indicates that the air force squadron at Donguz Airfield tows targets and launches drones for AAA units undergoing training at Donguz. AAA training is performed at Donguz AAA Training Area. (S/WN/NOFORN)

66. The AAA school probably trains reserve officers and conscripts. According to collateral, two AAA officer schools in Orenburg use Donguz as a training base.[1] Officer training is indicated by the small bivouacs seen at Donguz AAA Training Area and corresponding troop activity in barracks/administration area 2 which contains multi-story, brick barracks and extensive recreational facilities. Conscript training is indicated by the regiment-sized bivouacs at the AA training area and the corresponding troop activity in barracks/administration area 1, which contains only single-story, wood barracks and not the extensive recreational facilities in area 2. (S/WN/NOFORN)

67. The barracks area also contains a security unit and possibly an engineering unit. These units are probably unsubordinated and render support to both the probable AAA school and the DWTC. (S/WN)

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Donguz Airfield

68. Donguz Airfield (Figure 24) is 2.5 nm south of Donguzskaya. The squadron at the airfield operates in support of the DWTC and is subordinate to the probable AAA school at Donguz Military Barracks. The type of support includes towing of air targets, preparation and launch of LA-17 drones, and flight activity over designated areas. Aircraft organic to the squadron include approximately 12 IL-28 bombers, five MiG-15 fighters, 15 MiG-17 fighters, and three M-8 utility helicopters. The organization of this squadron apparently changes with the needs of the DWTC and the probable AAA school. (S/WN)

Donguz Radrel Station West

69. Donguz Radio Relay Station West (Figure 25) is 6.2 nm west of Donguzskaya. This facility consists of an R-400 microwave antenna and a partially underground control building. This facility was established prior to 1969 and provides communications with Orenburg. (S/WN)

Donguz AAA Training Area

70. Donguz AAA Training Area (Figure 26) is 3.5 nm west of Donguzskaya and 4.0 nm northwest of Donguz Airfield. This facility is under the operational control of the AAA school at Donguz Military Barracks and is the training area for AAA field exercises. The area may also serve as an air defense demonstration area. (S/WN)

Equipment Tested At Donguz

MRLs

71. The BM-27 was first identified in the vehicle storage park at Donguz WEPG Northeast on imagery of [redacted] (Figure 27), and the vehicle was probably just entering state trials. By [redacted] a substantial number of BM-27s and BM-27 resupply vehicles and unfitted chassis had been observed in the shipyard at Perm Armament and Merchandise and R&D Plant 172 [redacted] where they are produced. The number of vehicles at Perm indicates that the BM-27 was probably in series production in the latter part of 1975. Further testing of the BM-27 was subsequently observed at the Donguz FA/MRL Test Facility on [redacted] This observation could have still been part of the state trials phase. The first identification of deployed BM-27s was in July 1977 at Ussuriysk Artillery Division Headquarters/ Barracks North AL-2 [redacted] (S/WN)

72. The 122mm regimental MRL ZIL-131 was observed in the vehicle storage park on [redacted] (Figure 27). The vehicle was next to a BM-27 and BM-27 resupply vehicle. The regimental rocket launcher consists of a BM-21 rocket pod mounted on the ZIL-131 chassis; the regimental MRL closely resembles the BM-21 on imagery. Therefore, it is possible that the ZIL-131-mounted system was at Donguz on an earlier coverage but was not distinguishable from the BM-21. (S/WN)

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SAMs

73. The SA-13 missile system underwent development testing, field testing, and state trials at DWTC from 1971 to 1976. Probable developmental testing of the SA-13 was observed on [redacted] in area C, Donguz WEPG Northeast. The system was parked adjacent to its predecessor, the SA-9 (Figure 28). Testing of the system was observed through [redacted] when two SA-13s and one SA-9 were observed near the vehicle maintenance building in area A (Figure 29). On [redacted] the systems were probably undergoing maintenance in preparation for field testing. An SA-13 transporter-erector-launcher (TEL) remained at Donguz WEPG Northeast until August. (S/WN)

74. On [redacted] one SA-13 and one SA-9 were engaged in field tests at the Donguz AAA/SAM Mobile Test Area (Figure 30). Area C was the test firing site for the TEL while area B was the monitoring and control point. New equipment brought to area B to support the tests included two mobile TWIN CIGAR telemetry antenna vans, one TWO SPOT precision approach radar (PAR), and a ONE EYE area surveillance radar. The telemetry vans receive telemetric data from the missiles being fired. The TWO SPOT and ONE EYE radars together form a GCA system and are probably used to control the approach of aircraft acting as targets or towing targets. Two passenger buses, two cargo trucks, and numerous personnel were observed in area B, while three utility trucks and a smaller number of personnel were in area C. The passenger buses were probably used to transport technical personnel to the area. Six 85mm AA guns were also in area B; however, the guns were not involved in any observable training or test activity. 25X1

75. Field testing of the SA-13 was identified on [redacted] An SA-13 TEL was observed moving northwest on the dirt road leading out of area A. A downed drone was observed still smoldering in the snow approximately 2.3 nm north of this TEL at 51-25-47N 054-42-50E. Track activity and snow melt indicated that the SA-13 TEL was stored in the vehicle storage building in area A. Field testing had probably been completed by April 1974. On [redacted] the SA-9 and SA-13 TELs which had been absent from Donguz WEPG Northeast throughout the field test phase had returned to area C. This return to area C probably signaled the beginning of state trials for the SA-13. The SA-9 was not observed on the SAM test pads in area C from 1975 through 1977 while the SA-13 continued to be observed, indicating that the test phase shifted exclusively toward the SA-13. Deployment of the SA-13 was first identified in August 1977 at Svobodnyy Motorized Rifle Division Headquarters/Barracks North-Northwest AL-1 [redacted] (S/WN) 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1

Tank Testing

76. Tests involving the T-64 and T-72 tanks were observed at DWTC in 1979 and 1981. One T-64 and one T-72, both with an unidentified box mounted on the right side of their turrets, were observed at Donguz WEPG Northeast in 1979 (Figure 31). The tanks were first observed in the vehicle storage park on [redacted] From [redacted] the tanks were on a test pad in area C. By 2 August, the tanks had been returned to the vehicle storage park and departed Donguz shortly thereafter. The tests were probably related to the development of a new gun tube, new munitions, or a new fire-control enhancement device (such as a rangefinder). The boxes were either test models of a new device or monitoring devices. (S/WN)

77. A probable T-64 was observed at Donguz Armor Penetration Range on [redacted] (Figure 32). The tank was near the firing point for test station 1 and was probably involved in munitions tests. Track activity at the Armor Penetration Range on [redacted] indicated that an unidentified tracked vehicle had occupied the firing points at stations 1 and 2 and the unidentified test area. The vehicle, possibly a tank, was stored in the vehicle storage building at the Armor Penetration Range. (S/WN)

78. A probable gun tube test was identified at Donguz Armor Penetration Range on [redacted] A gun tube was mounted on a 203mm howitzer B-4 chassis. This chassis is commonly used to test various, large-caliber gun tubes. A witness panel had been set up approximately 25 to 30 meters forward of the B-4, and a panel had been set up at the end of the firing lane. Based on the number of punctured boards/armor plates on the ground adjacent to the two panels, ten to 30 rounds were fired. This position is used to test direct-fire weapons which have an effective range in excess of 2,000 meters. These weapons would include tanks and antitank guns such as the T-12 and T-12A. The identification of T-64s near that position in 1981 and indications of possible tank tests the week after this observation would strongly suggest that a tank tube was being tested. (S/WN)

APCs and AFVs

79. Developmental testing and state trials for the BMP M-1981 were observed at DWTC in 1977 and 1980, respectively. The vehicle was first observed in the Donguz WEPG Northeast on [redacted] The vehicle was on pad C in area C, probably undergoing developmental testing and was on the pad through [redacted] The BMP M-1981 was not seen again until [redacted] (Figure 33). During this approximate three-year period, the BMP M-1981 had probably been field tested but was not imaged. On [redacted] the vehicle was again on pad C in area C and was probably involved in state trials. The vehicle was not observed again at Donguz. The BMP M-1981 features a large, two-man turret and a probable 30mm main gun. The earliest known deployments of the system were to Soviet forces in Afghanistan. Photographs of the BMP M-1981 appeared in a 23 April 1981 issue of the West German magazine *Stern*.[4] However, it is not known if these were pictures of newly delivered BMP M-1981s or BMP M-1981s that arrived with the invading force in Afghanistan. Therefore, the vehicles could have been in the units at the end of 1979 or could have deployed as late as April 1981. It is also possible that Afghanistan may have been used for the field testing phase with some units equipped with only a small number of M-1981s. (S/WN)

80. Two BMD M-1979s were observed in area C at Donguz WEPG Northeast on [redacted] (Figure 34). Their appearance at Donguz was probably for display purposes only. The vehicles remained there through August. This observation followed by four months the first identification of these vehicles with Soviet forces in Afghanistan. (S/WN)

81. The BTR-70 APC was observed together with a BMD and a BTR-60 at Donguz WEPG Northeast on [redacted] Like the BMD M-1979, the BTR-70 was probably at Donguz for display purposes only. This relatively new follow-on to the BTR-60 has been in series production since at least 1977. (S/WN)

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82. The new APCs and AFVs observed at Donguz in 1980 and 1981 have all been deployed in Afghanistan. The BMD M-1979 and the BMP M-1981, first identified with Soviet forces in Afghanistan, arrived at Donguz together. The BTR-70 was observed in Afghanistan on [redacted] with some of the first arriving motorized rifle units. Upon coming to Donguz, the BTR-70 was parked adjacent to a BMD and BTR-60 in area A, possibly as part of a display. (S/WN)

Self-Propelled Guns

83. Developmental testing and state trials for the 152mm SP gun M-1981 were observed at DWTC from 1970 to 1977. The M-1981 prototype was first identified in area C of Donguz WEPG Northeast on [redacted] (Figure 35A). The prototype consisted of a gun tube mounted on a turretless 152mm SP howitzer M-1973 chassis. The breech area formed a delta shape at the rear of the chassis, and the end of the gun tube did not extend to the front of the chassis. The M-1981 prototype was observed in its revetted test position on [redacted] (Figure 35B), indicating the beginning of developmental tests. The prototype was in the vehicle storage park from [redacted] when it returned to area C for testing until [redacted] State trials of the M-1981 were observed underway in April 1977. No imagery was acquired of Donguz between [redacted] During that period, a new test position was constructed over the revetted test position used to test the M-1981 prototype. On [redacted] the new test position was partially dismantled, indicating the state trials had probably ended. The test position consisted of a wooden shed open at the west end. The roof was made of wood at the closed end with tarpaulin extending from the wood section to the open end. The tarpaulin precluded observation of the 152mm SP gun M-1981 while it was undergoing testing.

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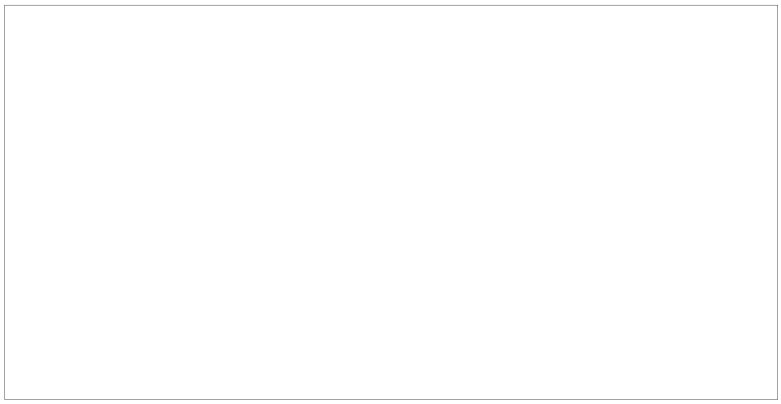


84. The M-1981 was first seen in the open on [redacted] Figure 36) in area A of Donguz WEPG Northeast. Several notable differences exist between the 152mm SP gun M-1981 and the prototype. These differences included a longer gun tube with a muzzle brake, the addition of a load assist mechanism on the right of the breech, a fire control/gunners compartment on the left of the breech, the expansion of the rear deck of the chassis, and the addition of a raised commander's compartment on the forward left side of the chassis. The M-1981 was next observed at the Donguz FA/MRL Test Firing Site 6 in September 1977. From [redacted] the M-1981 was in area C at Donguz WEPG Northeast. The earliest known deployment of the 152mm SP gun M-1981 was identified on [redacted] at Osipovichi Army Barracks South AL-2 [redacted] (S/WN)

85. The 203mm SP gun M-1975 (Figure 37) was in area C (Donguz WEPG Northeast) on [redacted] The gun had already been deployed to Soviet heavy artillery brigades at the time it was observed at Donguz where it was possibly undergoing munitions testing. The gun used the same test position that had been used to test fire the 152mm SP gun M-1981. (S/WN)

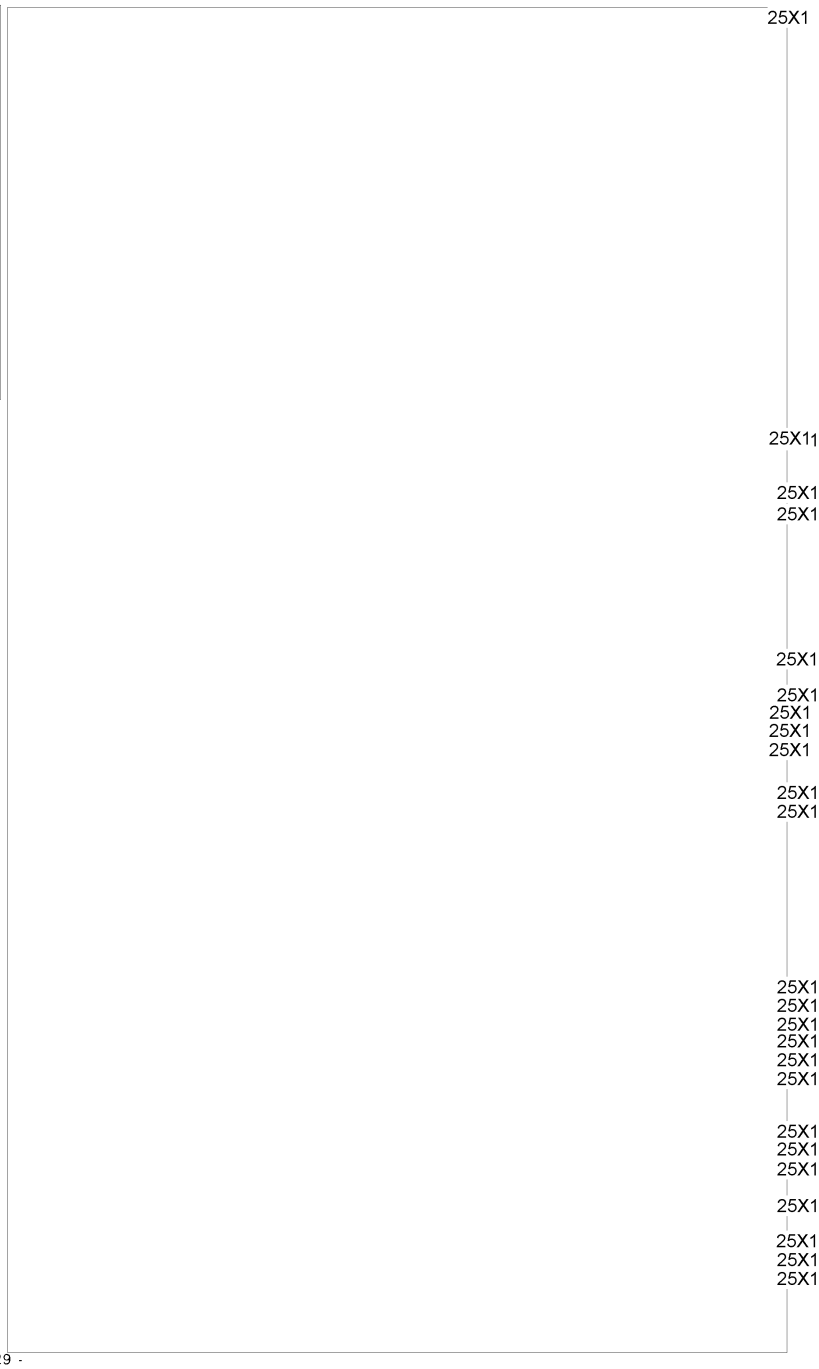
SP Mortars

86. Developmental testing, state trials, and troop training with the 240mm SP mortar M-1975 was observed at DWTC from 1971 through 1975. On [redacted] the SP mortar was in the vehicle storage park at Donguz WEPG Northeast and was observed there through [redacted] On [redacted] the SP mortar was gone from the vehicle storage park; the SP mortar had probably been moved to area C for developmental testing. On [redacted] the SP mortar was observed on a test firing pad in area C (Figure 38). The 152mm SP gun M-1981 prototype was being tested adjacent to it. The SP mortar was observed in area C through October. On [redacted], the mortar was again in the vehicle storage park, indicating that the developmental tests had probably been completed. From December 1972 to [redacted] the mortar was stored in the vehicle storage park. Field testing of the mortar probably occurred during this period but not at Donguz. On [redacted] the SP mortar was observed in the vehicle storage park adjacent to a 152mm SP howitzer M-1973. Neither piece of equipment was in the vehicle storage park on [redacted] The mortar was probably in area A or area C for state trials. However, these areas were not imaged during that time. According to collateral information, the 13th Heavy Artillery Brigade, Belorussian MD, spent 3 months of 1975 conducting firing exercises and participating in large-scale maneuvers at Donguz. The unit brought with it four newly acquired 240mm SP mortars.[2] A unit, fitting the description of the 13th Artillery Brigade, was observed at the Donguz Weapons Test Support Area on [redacted] (Figure 39). According to collateral, only two units had received the new system at that time—the 13th Heavy Artillery Brigade in Lapichi, which received its mortars in the spring of 1975, and the 12th Heavy Artillery Brigade (location unknown), which had received its mortars at an earlier date.[2] (S/WN/NOFORN)

Antiaircraft Artillery

87. A possible ZSU-23/4 follow-on vehicle, designated ZSU-X; an interim vehicle to the ZSU-X, designated ZSU-I; and a probable towed version of the gun system, designated ZU-X, have been identified at Donguz. (S/WN)

88. R&D related to upgrading the radars for the ZSU-X was observed in area A on [redacted] A possible prototype of the ZSU-X was first identified in area A (Donguz WEPG Northeast) on [redacted][3] An uncovered ZSU-X was seen on [redacted] when the vehicle was parked adjacent to the vehicle maintenance building in area A. The vehicle is mounted on a probable T-72 chassis with a large bulky turret. The actual gun and radar configuration was not identified at that time. The first observation of this vehicle test firing was on [redacted] when it was identified on the artillery firing line in area C. By 1982, a new test firing position for the system had been constructed adjacent to pad C in area C. The ZSU-X was observed entering area C on [redacted] The ZSU-X may prove to be the follow-on to the ZSU-23/4. (S/WN/NOFORN)



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89. A probable ZSU-I prototype vehicle was identified at Donguz in 1978. On [redacted] an air defense battery was observed in area A (Donguz WEPG Northeast). The unit was equipped with four apparent ZSU-23/4s and four SA-9s. Two of the four ZSU-23/4s were possible ZSU-I and appeared to have larger gun tubes than the other two. This difference was confirmed when the systems were displayed (Figure 40). On [redacted] the two possible ZSU-Is were in a visual security-fenced area while the other two ZSU-23/4s were in the open. The first confirmed ZSU-I was identified on [redacted] on a hardstand in area A (Figure 41). The vehicle was adjacent to a FLAP WHEEL. Distinguishing features included larger gun tubes and an unidentified device on the left rear corner of the turret. The ZSU-I is probably meant to fill the gap until the ZSU-X goes into series production. The introduction of an interim vehicle is not uncommon. For instance, the SA-11 will ultimately replace the SA-6, but in the interim units have received the SA-6B. (S/WN)

90. According to collateral sources, a ZSU-23/4 follow-on system was already in series production in 1982.[6] The ZSU-I is probably the system discussed in the collateral since it is known to have been in existence for at least five years and uses the same chassis as the ZSU-23/4. (S/WN/NOFORN)

91. Six probable ZU-X towed AAA pieces (three shown on Figure 42A) were identified in area C on [redacted] The appearance of these pieces coincides with the construction on the test position for the ZSU-X adjacent to pad C in area C. On [redacted] one of these pieces was placed on pad C (Figure 42B). The firing lane for that piece was parallel to the lane for the ZSU-X. The ZU-X is mounted on a small carriage, similar in size to the 37mm AA gun carriage. An unidentified structure is mounted on the right side of the shield, and the platform is offset toward the forward wheels. This AAA piece may be a towed version of the ZSU-X. The practice of developing a towed and SP version of a system is common for artillery. For instance, the ZU-23 is the towed version of the ZSU-23/4, and the 57mm AA gun S-60 is the towed version of the ZSU-57/2. (S/WN)

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Air Warning Systems

92. Developmental testing of the SQUAT EYE was performed at Donguz in 1966. The SQUAT EYE was the first AW radar identified at Donguz. It was in area A of the Donguz AAA/SAM Mobile Test Area on [redacted] Its presence at Donguz then suggests that Donguz, which tests AW systems, was the test facility for the SQUAT EYE. The SQUAT EYE has been involved in numerous tests at Donguz since then. (S/WN)

93. Developmental testing of the LONG TRACK had probably occurred at Donguz by 1966, and field testing occurred in 1968. The LONG TRACK was first identified at Donguz WEPG Northeast on [redacted] In November 1968, two LONG TRACKs and one THIN SKIN B were aligned on the east side of the vehicle

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maintenance/storage building in area B (Figure 43). An identical type formation of vehicles was observed in this area on imagery of poor interpretability taken between [redacted] and [redacted] suggesting that the LONG TRACK had been tested at Donguz as early as 1965. On [redacted] these vehicles were not in area B and might have been moved to the Donguz Weapons Test Support Area for field testing. Several possible electronics systems, including possible LONG TRACK, were observed at the Donguz Weapons Test Support Area on [redacted] The LONG TRACK observed on [redacted] may have been the first to return from the Weapons Test Support Area. The LONG TRACK probably underwent developmental testing up to at least 1966 and was field tested through August 1968. The testing observed after September 1968 was probably part of the state trials. The LONG TRACK was deployed in 1968 to early warning (EW) and ground-control intercept (GCI) sites [redacted]

94. Photographic intelligence (photint) indicates that state trials on the ODD PAIR were performed at Donguz during 1970. The ODD PAIR was first identified in September 1968 at Sary-Shagan Missile Test Center (MTC) Launch Complex A [redacted]? It was not observed at Donguz until [redacted] when it was in area B, Donguz WEPG Northeast. The appearance of the ODD PAIR coincided with the appearance of other AW radars including BAR LOCK, FLAT FACE A, THIN SKIN B, SPOON REST A, SQUAT EYE, and SIDE NET. The ODD PAIR was last seen in area B on [redacted] By May 1971, the ODD PAIR and these other radar systems observed with it had been removed from area B. The first identification of an ODD PAIR deployment was at the Murmansk Suspect SA-5 Site ([redacted]) in August 1972. Given the sequence of these events, it would appear that Sary-Shagan was a field test site for the system, and Donguz was used to conduct state trials. Kapustin Yar Missile/Space Test Center SSM [redacted] may have also been involved in the state trials, since an ODD PAIR was identified there in February 1971. (S/WN)

95. The FLAT FACE B probably underwent developmental testing and state trials at Donguz. The FLAT FACE B was first identified at Donguz on [redacted] (Figure 44) but had been there since at least [redacted] The system was probably undergoing developmental testing in area B, Donguz WEPG Northeast, adjacent to its predecessor, the FLAT FACE A. The system was not observed at Donguz again until May 1976. It was probably field tested during the period of its absence from Donguz. On [redacted] the system was observed in the vehicle storage park at Donguz WEPG Northeast. Its return to Donguz was probably for state trials. On [redacted] a deployed FLAT FACE B was observed at Sasyktau Missile Launch Facility ([redacted]) and, by the end of 1977, had been deployed to several missile sites and AW units in the USSR [redacted] (S/WN)

96. Developmental testing and state trials on the ODD GROUP were performed at Donguz in 1973 and 1977, respectively. The ODD GROUP was first observed at Donguz on [redacted] (Figure 45). The system was observed in area B,

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Donguz WEPG Northeast, during probable developmental testing. The system was still there on [redacted] but by [redacted] had been returned to the vehicle storage park. Field testing probably occurred in 1975 and 1976, but there was no evidence of field testing at Donguz. However, state testing of the system was observed on [redacted] The ODD GROUP was set up in area B, Donguz WEPG Northeast. The state trials were observed through [redacted] the ODD GROUP was no longer being tested and was observed at a new position within area B. It remained in this new position from [redacted] and was possibly on display. Such a display at Donguz usually indicates that the system has been certified and will soon be deployed. The first observation of ODD GROUP radar was at Ribnitz/Damgarten GCI Radar Facility [redacted] in August 1979. The ODD GROUP was also observed at Kapustin Yar Electronics Related Facility [redacted] on [redacted] and Sary-Shagan MTC Launch Complex A on [redacted] (S/WN)

97. Developmental testing of the SPOON REST D was probably performed at Sary-Shagan MTC, Launch Complex A, where it was first seen between [redacted] Probable field testing of the SPOON REST D was observed at Donguz Weapons Test Support Area on [redacted] (Figure 46). Two other facilities may have been used to troop test the SPOON REST D; these tests were conducted at Pechenga SAM Site D07-2 [redacted] where it was first seen on [redacted] and Liepaja SAM Site A01-2 [redacted] where it was first seen on [redacted] a SPOON REST D set was in the vehicle storage park at Donguz WEPG Northeast. At this point, field tests were probably completed, and state trials were underway. On [redacted] a SPOON REST D was in the vehicle storage park along with the operations vehicle and one van from a second set. The antenna vehicle and a second trailer for the second set were in area B. This coverage probably took place after state trials had been completed. By the end of 1973, the SPOON REST D had been observed at several airfields in the USSR and Poland and with Soviet EW battalions. (S/WN)

98. State trials of the DOG TAIL AW radar were observed at Donguz WEPG Northeast from August 1978 to September 1979. The DOG TAIL (Figure 47) was first observed on [redacted] in the vehicle storage park, along with a SPOON REST D set. On [redacted] the DOG TAIL and SPOON REST D were in area B, and by [redacted] the systems were in operation. As many as four DOG TAILs were probably being tested for compatibility with THIN SKIN, BAR LOCK, ODD PAIR, FLAT FACE, and SQUAT EYE. State trials were probably completed before [redacted] At that time, three of the four DOG TAILs were in the travel mode, and the fourth was still operational. The DOG TAILs were first observed at Soviet GCI and AW sites in February 1979, indicating acceptance had occurred, and series production had begun by at least the latter part of 1978. (S/WN)

ECM/ESM Systems

99. The VIEW POINT intercept/jamming radar was observed during developmental testing and state trials at Donguz. The system was observed in area A, Donguz WEPG Northeast, on [redacted] (Figure 48). At that time, the system was in travel mode in area A. Developmental test-related activity was seen on [redacted] when the radar was in the operational mode. The VIEW POINT was gone from Donguz by [redacted] probably for field testing. The state trials for the VIEW POINT were observed in area A, Donguz WEPG Northeast from [redacted] (Figure 49). During that time, two VIEW POINTs were in the operational mode. The systems were gone by [redacted] The first

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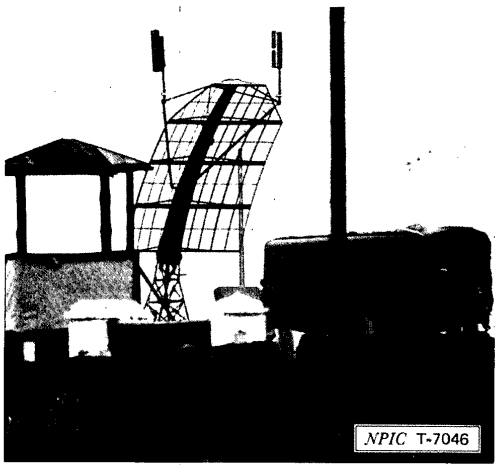

FIGURE 50. MODIFIED BAR BRICK

100. (S/WN) A modified BAR BRICK interceptor radar was in development at Donguz WEPG Northeast possibly as early as 1972. The modification consists of two unidentified detectors/antennas mounted on two vertical arms attached to the rear of the vertical sail (Figure 50). A possible modified BAR BRICK was in area A with a SWING BOX interceptor radar on [redacted] The modified BAR BRICK was gone on [redacted] but was present on all coverage until [redacted] Having probably completed developmental testing and possibly state trials, the modified BAR BRICK was first identified deployed at [redacted] November 1977.[8] The modified BAR BRICK was not observed again at Donguz WEPG Northeast until [redacted] when it was placed in a new secure test area in area A, where it was in the operational mode until [redacted] (S/WN) 25X1 25X1

101. The PAINT BOX ECM radar was first identified during probable field testing at Donguz Weapons Test Support Area on [redacted] (Figure 51) and [redacted] Subsequently, the PAINT BOX was observed in area B, Donguz WEPG Northeast, on [redacted] probably preparing to begin state trials. PAINT BOX systems were observed in the operational mode in area B from [redacted] one PAINT BOX was at the Donguz Controlled Fragmentation Test Area. On [redacted] the PAINT BOX was again in area B of Donguz WEPG Northeast and was seen in operation on [redacted] The first identification of a deployed PAINT BOX was on [redacted] at Vladivostok ECM Facility Southeast [redacted] (S/WN) 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1

102. Developmental testing and state trials of the DOG CART jamming radar were performed at Donguz from 1976 to 1978. The DOG CART was first observed in area A, Donguz WEPG Northeast on [redacted] (Figure 52). The system was in the travel mode and was being towed by a box-bodied van (BBV) truck. The DOG CART was probably in developmental testing from May 1976 to April 1977. On [redacted] the DOG CART was on the apron at the south end of the storage building and was adjacent to a KING PIN which is very similar in appearance. The DOG CART was connected by cable to a URAL-375 BBV, possibly a generator truck, parked along the east side of the building. 25X1 25X1 25X1 25X1 25X1 25X1

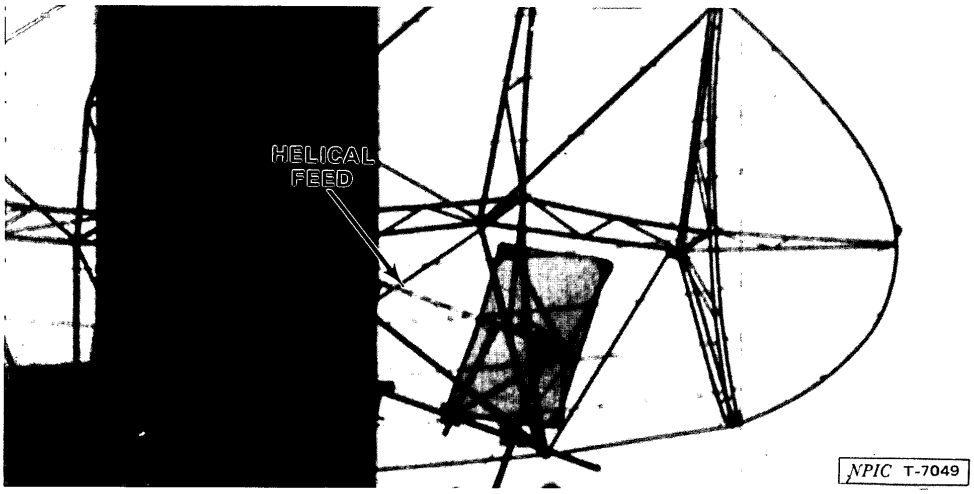

FIGURE 53. MODIFIED SQUAT EYE

FIGURE 54. MODIFIED STOVE PIPE

This arrangement was observed at Donguz through [redacted] the system was not present and had possibly been stored or removed from Donguz; however, during that time, field testing may have been performed. On [redacted] the DOG CART was again on the apron where it was initially tested, and a BIG CAP generator vehicle was first identified.[9] State trials for the DOG CART were probably underway by this time. On [redacted] the DOG CART and the BIG CAP were connected by cable. The state trials were observed through [redacted] A deployed BIG CAP and DOG CART set was observed at Vladivostok Bukhta ECM Facility, USSR [redacted] in November 1978. The DOG CART was observed with a modified BIG CAP (BIG CAP B) in area B of Donguz WEPG Northeast on [redacted][10] Deployment of the new BIG CAP had previously been observed in [redacted] in December 1980.[11] It is apparent that the BIG CAP B is now the standard generator vehicle for the DOG CART. (S/WN)

103. Possible modified SQUAT EYE research was identified in area B, Donguz WEPG Northeast, from [redacted] The modified SQUAT EYE (Figure 53) is believed to be a passive intercept system. The modification consists of a new helical feed compared to the rectangular feed of the AW version.[12] The possible modified SQUAT EYE was on a short mast in the southwest corner of area B. On [redacted] a modified SQUAT EYE was observed [redacted] and [redacted] Following these initial deployments in [redacted] the system was widely deployed in [redacted] and the USSR. These observations in [redacted] indicated that the presence of this system at Donguz in 1978 was possibly for state trials. (S/WN) 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1

104. The SKY BOARD ECM radar system was first identified in area A, Donguz WEPG Northeast, on [redacted] The system was seen operating at that time and remained operational at least until August 1977. The system was in a travel mode through 1978 and was not seen at Donguz in 1979. However, during that time the system was identified at [redacted] in 1978; at Kuyvozi Possible Signal Intelligence Site [redacted] USSR, in 1979; and at Shchelkovo Army Barracks Kaliningrad AL-1 (BE [redacted] USSR, in 1980. Activity relating to testing of the system was again observed in area A on [redacted] when three SKY BOARD systems came into the area. On [redacted] the three systems were put on display in area A. Based on the sequence of events, the 1977 identification of the system at Donguz was probably the developmental testing phase, the three subsequent observations were probably for field testing, the return to Donguz was for state trials, and the subsequent display was for customer representatives. (S/WN) 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1 25X1

105. The modified STOVE PIPE probable tactical air navigation (TACN) jammer was first identified in area B, Donguz WEPG Northeast, on [redacted] (Figure 54). Analysis of prior imagery revealed that the jammer was probably there on [redacted] The system was previously 25X1 25X1 25X1 25X1 25X1

mounted on a ZIL-157 van truck, but the jammer is now mounted on the newer ZIL-131 van truck. The antenna on the modified STOVE PIPE was erected on the rear of the van body. On the older system, it was erected on the front of the van body. On [redacted] Additional sightings at Donguz or in other areas are needed to determine if the presence of this system at Donguz was for developmental testing or state trials. (S/WN)

106. The SCOUT CAMP intercept system was identified on [redacted] This system is comprised of three four-vehicle sets. On [redacted] three vehicles of the set were in the vehicle storage park, and the remaining nine were in area B. On [redacted] the system was set up in area B.[14] The three sets that make up the system were later repositioned. On [redacted] one set was in area B, one was in area A, and the third set was in the Donguz Controlled Fragmentation Test Facility. In October, all three sets were set up in area B. No evidence of system testing was observed in 1982; this system is probably still in the developmental stage. At the time of this report, the system may have gone to other facilities for field testing but might return to Donguz by 1985. (S/WN)

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REFERENCES

IMAGERY

All applicable satellite imagery acquired from [redacted] was used in the preparation of this report. (S/WN)

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Small-Format Imagery

Figure	Agency	Accession No	Date	Classification
47A	DIA	2215 4630 81	1981	CONFIDENTIAL
[redacted]				
50	DIA	1 215 0180 77	1977	CONFIDENTIAL
53	DIA	1 215 1512 80	1980	CONFIDENTIAL
54	DIA	2217 7096 81	1981	CONFIDENTIAL

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MAPS OR CHARTS

DoD. US Air Target Chart, Series 200, Sheet 0236-2, scale 1:200,000 (SECRET)

DOCUMENTS

1. CIA. [redacted] *1. Antiaircraft Artillery Battalion,* [redacted] *2. Special Proving Ground in Donguz; 3. Antiaircraft Artillery Officers' School No. 2 and Other Training Schools in Orenburg,* 30 Mar 62 (SECRET/NOFORN/CONTINUED CONTROL)

25X11

[redacted]

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4. C8041C, *Stern,* p 242, 23 Apr 81, West Germany (UNCLASSIFIED)
5. NPIC. Z-14647/82, IAR-0096/82, *Research and Development of The Soviet ZSU-X (S),* Dec 82 (SECRET/NOFORN)
6. DIA. DIADIN 140-3A, *USSR: New Antiaircraft Weapon (U),* 210001Z May 82 (SECRET/WNINTEL/NOFORN)
7. CIA/IAS. [redacted] *Analysis of Large Height Finder Radars at Kapustin Yar, Sary Shagan Missile Test Center, and Donguz* (TOP SECRET CODEWORD*)

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[redacted]

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9. NPIC. [redacted] PIR-051/79, *New Electronics Systems, Donguz Artillery Test Area, USSR (S),* Jun 79 (TOP [redacted]

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10. NPIC. Z-20063/81, IAR-0061/81, *Modified BIG CAP identified at Donguz, USSR (S),* May 81 [redacted]

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11. DoD. 2-217-7086-80 (U), *Modified BIG CAP at Schonwalde 281,* 301530Z Dec 80 [redacted]

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12. DoD. 1-215-1512-80, *Modified SQUAT EYE (U),* 15 Feb 80 (CONFIDENTIAL)
13. DoD. 2-217-7096-81, *Order of Battle, U/I ZIL-131 and URAL-375 BBVs,* 2 Sep 81 [redacted]

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14. NPIC. Z-20201/81, IAR-0207/81, *New Probable Direction-Finding System Observed at Donguz Artillery Test Area, USSR (S),* Jan 82 [redacted]

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*Extracted information is classified [redacted]

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***Extracted information is classified SECRET/WNINTEL.

REQUIREMENT

COMIREX L03
Project 543006L

Comments and queries regarding this report are welcome. They may be directed to [redacted] Warsaw Pact Forces Division, Imagery Exploitation Group, NPIC, [redacted]

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